

Claims

1. A bipolar electrosurgical instrument for clamping, sealing and cutting tissue comprising:

- 5 (a) a handle;
- (b) a body joined to the handle;
- (c) a jaw assembly joined to the body and arranged such that manipulation of the handle relative to the body allows tissue at a surgical site to be clamped between opposed jaws of the jaw assembly;
- 10 (d) a first of said opposed jaws having at least a first sealing electrode, the jaw being formed with a recess extending longitudinally along a length dimension of said first jaw;
- (e) the other of said opposed jaws having at least a second sealing electrode, the jaw having a cross-section exhibiting a raised central zone adapted to conform to the recess of the first jaw for pinching and tensioning the tissue when at least one of the jaws is made to close relative to the other jaw; and
- 15 (f) a cutting electrode supported by one of said opposed jaws.

2. The bipolar electrosurgical instrument of claim 1 wherein the cutting electrode extends in spaced, centered relation along a length dimension of a sealing surface of the second sealing electrode located above and generally parallel to said central zone.

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3. The bipolar electrosurgical instrument of claim 1 wherein the cutting electrode comprises a protuberance disposed on and insulated from an outer surface of the second sealing electrode.

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4. The bipolar electrosurgical instrument of claim 1 wherein the body is pivotally joined to the handle.

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5. The bipolar electrosurgical instrument of claim 1 wherein the body comprises an elongated tube having a lumen extending the length thereof and the handle is mechanically coupled to the first and the other of the opposed jaws through the lumen.

6. The bipolar electrosurgical instrument of claim 1 and further including switching means for selectively applying a sealing voltage between the first and second electrodes or a cutting voltage between the cutting electrode and at least one of the first and the second sealing electrodes.

7. The bipolar electrosurgical instrument of claim 6 wherein the switching means is configured to apply a cutting voltage between the cutting electrode and both said first and second sealing electrodes.

8. The bipolar electrosurgical instrument of claim 1 wherein the first of said opposed jaws includes an insulating strip that extends along a length dimension of said first of said opposed jaws in alignment with said cutting electrode supported by the other of said opposed jaws.

9. The bipolar electrosurgical instrument of claim 1 wherein the cutting electrode is supported by an insulating material on one of said opposed jaws.

10. The bipolar electrosurgical instrument of claim 8 wherein the cutting electrode is supported by an insulating material on one of said opposed jaws.

11. The bipolar electrosurgical instrument of claim 8 wherein the insulating strip is a resilient structure.

12. The bipolar electrosurgical instrument of claim 11 wherein the resilient structure is compressed by the cutting electrode when at least one of the jaws is made to close relative to the other jaws to thereby apply an opposing return force to the cutting electrode.

5 13. The bipolar electrosurgical instrument of claim 1 wherein the cutting electrode is affixed to and electrically insulated from the first sealing member.

14. The bipolar electrosurgical instrument of claim 1 wherein the cutting electrode is affixed to and electrically insulated from the second sealing electrode.

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